



Scholar Reflections from...

Victoria



2019 Crawford Fund Annual Conference

Seven Victorian scholars attended the 2019 Crawford Fund conference – three supported by our VIC Committee, two supported by the Gardiner Foundation, and one each supported by the University of Melbourne’s Faculty of Veterinary and Agricultural Sciences (FVAS) and RMIT.

Our competitive Conference **Scholarships** are offered to young people with a genuine interest in international agricultural research and development to attend the conference and participate in a special set of activities that we have developed since the program commenced in 2010.

Once again, we would like to thank our wonderful mentors, mentioned alongside the scholar they supported, who volunteer their time and offer valuable guidance, support and insights to the scholars throughout the conference.

VIC COMMITTEE SPONSORED SCHOLARS

Nickala Best, *LaTrobe University*

Mentor: Mike Taylor AO, *Crawford Fund Board*

The Crawford Fund Conference 2019 was a nice departure to my usual conference experience – I found it personal and gained different perspectives to what I am normally exposed to. Attending as a scholar, my favourite aspect was meeting my mentor, as this is what provided the personal aspect to the conference that you don’t normally get. It was great to be able to talk to someone with so much experience and who was also very thoughtful. The time taken to talk to the scholars by the mentors is very generous and the events organised by the RAID network were valuable for both meeting peers and other mentors.

I particularly enjoyed the economics aspects that were presented and came away with more awareness of how the private sector is addressing climate change. It was clear to me that carbon sequestration is a viable new market for Australia, and an opportunity for primary producers to offset some of the carbon produced by primary industry, if the market was there to provide incentives. The impression I came away with was that the transition to a more sustainable mode of agriculture, and industry in general, is going to be driven through market risks and rewards from corporations, to businesses that are trying to minimise the impact they are having on the environment. That seems to be the fastest way to enact change, through monetary incentives. It was great to hear from Rebecca Boustead, as an example of how you can create corporate behavioural change from within a corporation. This sentiment was seconded with the talk from Sarah Barker, who indicated there would be work for millennials in plastics companies (for example), should they want it. I felt these talks, combined with the implication that policy can be slow to respond to the climate crisis, made me think that if the right people become involved with the right companies, and maintain sustainable ideologies, change can be made quickly in the private/industry sector. As they are major contributors to the emissions that have contributed to climate change, it could only be a good thing. Another big take away for me was that responding to the climate crisis is inevitable, with industry, research and policy all being very important, but as Professor Sir Charles Godfray stressed, there will be people who are impacted more than others, and a compassionate and socially responsible attitude to these groups will be needed to maintain stability.

I met a lot of interesting people at the conference, as was exposed to information and ideas that I had not previously come across, which was exactly what I was hoping to get from the experience. I’m very grateful I was given the opportunity to attend as a Crawford Scholar, and came away with a sense of where I can put my efforts to help with the changes that need to be made.

Lily Tran, *LaTrobe University*

Mentor: Ted Hayes AO, *Crawford Fund Victoria Committee*

This year’s conference theme was titled “Weathering the ‘Perfect Storm’: Addressing the Agriculture, Energy, Water, Climate Change Nexus”. I had hesitations that this theme may not be relevant to my research, however within minutes of meeting scholars from all over Australia, I immediately realised that my concerns were simply me just overthinking.

Scholars were presented with two and a half days’ worth of scholar activities, consisting predominantly of seminars in between the Parliamentary conference. The seminars complemented the main conference nicely.



with speakers sharing advice and experiences in different aspects of agriculture. From each speaker, I was always able to gain key take away messages. My top 3 talks from the scholar activities in speaker order were: The Hon John Anderson AO, Prof Robyn Alders AO & Dr Aditi Mukherji who were all captivating speakers that motivated and inspired us all to contribute more to international agriculture, in addition to improving and striving to become a better researcher. These talks were further complemented at the networking dinner where I had the opportunity to speak with Dr Mukherji & Prof Alders. Each researcher was friendly, imparted great advice and was genuinely interested in the conversation at hand. This experience was humbling as I often feel that as a student, I don't really matter. However, having established researchers encourage and support my research was an empowering moment for me.

On conference day, I thought that the topic of climate change often incites pessimism. To my surprise most of the talks were surprisingly optimistic. The morning keynote delivered by Prof Sir Charles Godfray opened with a refreshingly optimistic view that a simple diet change is capable of changing the world, even in the face of climate change.

The optimism was further continued with Dr Mayberry's talk on reducing greenhouse gas emissions from red meat. As an animal agricultural researcher, I enjoyed listening to one of the few animal talks. She highlighted the immense reduction in greenhouse gasses produced by cattle in recent years and most importantly, stressed the importance of red meat production in developing countries. Lastly, my highlight and favourite speaker of the conference was Dr Phonekhampheng who delivered a captivating talk on fish agriculture along the Mekong river. He overcame minor language barriers and was by far the most passionate speaker of the day emphasising just how important fish are in South East Asian countries.

Through the Crawford Fund Scholar Program, I was able to experience a wide range of new and different aspects of agriculture that I normally don't get exposure to. I would also like to say thanks to my mentor Ted Hayes for volunteering his time and introducing me to some incredible researchers, some of which I now follow on Twitter. Lastly, thank you to the Crawford Fund for supporting me and allowing me to participate in the Scholars program.

Antoinette Wichmann, University of Melbourne (FVAS)

Mentor: Miriam McCormack, ACIAR

The 2019 Crawford Fund conference "Weathering the 'Perfect Storm': addressing the Agriculture, Water, Climate Change Nexus" and the complementary scholar program was an experience I will value and benefit from greatly.

As a veterinary medicine student, I was very interested in the role of veterinarians in international research as well as the impact the animals I will ultimately be providing medical assistance to, have on climate change. While the conference definitely had an agricultural focus more than veterinary, I was pleasantly surprised by the many vets that attended this conference. I think I was previously unaware of how many doors this degree opens outside of the classical clinical setting of the veterinary profession. I loved the ample networking opportunities on offer to get a more personal insight into the careers and paths the presenters had undertaken.

The scholar-mentor program was an invaluable part of the conference. I really appreciated having someone experienced and passionate about the future of our planet take their time to ensure I got the most out of the conference. The ability to meet other like-minded young individuals from all around Australia was another great aspect of this program and the introduction to RAID enriched these connections. The scholar-mentor afternoons, two nights spent with other scholars and RAID trivia night enhanced the experience of the trip tremendously.

The one-day conference at Parliament House was very insightful and uplifting. While I think there is a lot of work to be done to increase the survivability of our planet, the discussions, talks and questions answered during the day made me realise there are options and definitely progress in the right direction. Based on my veterinary focus I particularly found the talk by Dr Di Mayberry on "Raising the Steaks: Reducing GHG Emissions from Red Meat in Australia and Developing Countries" very interesting. We know nutrition plays a large role in emissions but applying this idea to animals and thinking about what affect the feed we provide cattle has on the emissions was a new thought process to me. I hope to see some more research and application of this in the foreseeable future.

The final presentation by Sarah Barker gave a very different perspective on how climate change has to be tackled and I think was a perfect way to end the conference. While yes there is a lot of research going into how to reduce emissions, utilise green energy, we need to be able to apply and sell these technological advances to businesses and corporations. Sarah Barker highlighted that money ultimately still drives most people – whether healthy for our planet or not. While she may have brought a more critical note to the theme of the conference it felt realistic and a call to look at all perspectives of climate action.

I am proud, honoured and grateful to have been part of the Crawford Fund scholar program in 2019 and hope to become more involved with RAID and the Crawford Fund in the future. Thank you for enabling me this opportunity.



GARDINER FOUNDATION SPONSORED SCHOLARS

Natasha de Bondi, *The University of Melbourne (FVAS)*

Mentor: Prof Robyn Alders AO, *Crawford Fund NSW Committee*

I felt extremely privileged to have been given the opportunity to become a Crawford Fund Scholar. With a background in Environmental Science and currently completing my final year of Veterinary Medicine I was particularly interested in the theme of this year's conference - 'Addressing the Agriculture, Energy, Water, Climate Change Nexus'. From the moment I first heard about the One Health concept – that human, animal and ecosystem health are inextricably linked, I have been wanting to learn more about these relationships. However, having spent the past six years focussing on my studies in veterinary medicine I have felt relatively withdrawn from the fields of environmental and climate change science. The Crawford Fund scholar program provided me with great reconnection and insight into the One Health domain and its inter-disciplinary approach was invaluable in broadening my perspectives on food security and global health.

The opening address by Professor Ross Garnaut AC explicitly portrayed the stark realities of 'The Perfect Storm' facing global food security but also left me with a feeling of hope for the potential to turn around current trends and build on the many small positive changes occurring throughout the world. The conference setting in Parliament House served as a central reminder of the important roles that policy and social sciences must play in order to adequately address issues of food security. In addition, the scholar days allowed me to meet several young people working in policy or social sciences. This allowed me to learn more about these disciplines and their importance in bridging the gap between narrow-focus scientific research and on-the-ground implementation of emerging innovations. I also found the session presented by Sarah Barker on the financial and liability aspects of climate change fascinating as it challenged me to consider the current climate situation from a completely different field of thought and reconsider many of my pre-conceived ideas.

The case studies presented by Dr Ajay Mathur on solar powered irrigation solutions in India and Dr Oudom Phonekhampheng on the construction of fish passes along the Mekong river to restore local fisheries illustrated how local initiatives can have significant benefits for both local and global communities. These speakers really inspired me to contribute to on-the-ground initiatives and get involved with local projects.

My mentor Prof Robyn Alders offered invaluable guidance on pathways into food security and global health as a veterinarian. Her wealth of experience in this field was tremendously inspiring and filled me with eager anticipation for my future career. As a soon-to-be graduate veterinarian the opportunity to meet with several veterinarians currently working in the food security area was instrumental in helping me to form early career goals that will provide me with the skills and knowledge required to make a valuable contribution to global food security in the future.

The speakers and activities on the scholar days provided a real sense of community with like-minded people and made me aware of wonderful organisations such as RAID and ACIAR. As I have a strong wish to become a volunteer upon graduating the focus on the many volunteering opportunities available in food security was extremely exciting for me and the first-hand accounts of previous volunteers' experiences confirmed my desires to become involved.

I left the Crawford Fund Conference full of inspiration and renewed enthusiasm to carve a path toward a career in food security and global health. I now feel more equipped to pursue this dream with the help of personal contacts, knowledge of key organisations and a sense of community amongst all those working in this important field.

Josephine Ginty, *The University of Melbourne (FVAS)*

Mentor: Prof Shaun Coffey, *The Crawford Fund*

The Crawford Conference 2019 provided an incredible opportunity to be exposed to the cutting edge of agriculture. As a Crawford Scholar, I was privileged to listen and learn from the leaders of the modern agricultural revolution, and gain insight and guidance from the people and businesses that are already shaping the future of our world.

The key message of the conference was best captured, I think, in the opening address by Professor Ross Garnaut AC, who expressed an impressive breadth of knowledge of the many options for tackling the climate, agriculture, energy and water nexus. His optimistic conclusions set the tone for the rest of the conference, where case after case illustrated the leaps being made as climate smart agricultural practices are implemented around the world.

Indeed, 'climate smart agriculture' were the buzzwords of the day. This term, coined by the FAO in 2013, describes the process of increasing productivity, increasing resilience, and mitigating impacts of agricultural systems in order to prepare them for the future. Such practices have been put into action in projects like the Climate Smart Villages in South-East Asia and the Pacific, the improvement of genetics and resource use of crops in parts of



Africa and Asia, and the increased access to water for crops with solar pumps in India. Such solutions utilise existing technologies and knowledge, and share them with the people who can use them best.

Larger scale changes were also a focus, with Professor Sir Charles Godfray FRS and Sarah Barker speaking about global changes that are pushing the modern agricultural revolution, despite the stagnation of government policy. I was inspired to hear about the United Kingdom's National Farmers Union's pledge to be carbon neutral by 2040, but disheartened of no such pledge existing in Australia. This feeling of inspiration and disappointment – a metaphorical one step forward and two steps back – dogged me for much of the conference.

In fact, despite the optimistic central theme, my personal take home message from the conference was far less inspiring. Not unlike Dr Oudom Phonekhampheng's fish, I got a sense that this modern agricultural revolution is a process of building steps for fish to climb up and reach their ponds, rather than tearing down the dams that trapped them in the first place. The absence of innovation in the climate smart principles is, in my opinion, a major oversight, and its absence was strongly felt in the reluctance of the conference to discuss long term changes in the livestock sector, impacts of intensified agriculture on biodiversity, and the social costs of climate and agricultural change.

I truly enjoyed my experience as Crawford Scholar and was provided with much food for thought to ruminate on as I continue my studies. It was truly a privilege to meet and hear from so many of the people at the forefront of the climate revolution, and I look forward to discovering the contributions I can make to positive change as I strive for sustainability in my career in the agricultural sector.

UNIVERSITY OF MELBOURNE (FVAS) SPONSORED SCHOLAR

Emma Taylor

Mentor: Dr Tony Gregson AM, *The Crawford Fund Victoria Committee*

As a second year Bachelor of Agriculture student I found that the scholar program for The Crawford Fund conference was a fantastic opportunity to learn and meet new people. The topic, "Weathering the 'Perfect Storm': Addressing the agriculture, energy, water, climate change nexus" provided detailed and expansive discussions about the challenges we face in the future of agriculture around the world. I learnt that there are a vast number of opinions and suggestions for the way we should approach this topic and everyone's approach is slightly different.

From Professor Ross Garnaut we heard the motivating and encouraging Sir John Crawford Memorial Address. We learnt about the many opportunities available for improving sustainability while also maintaining high-quality productivity and profitability of our farms. Over the next day, we heard from others who shared that positive outlook such as Prof Sir Charles Godfray and Dr Bruce Campbell. On the other hand, we also heard from some speakers who had a more pessimistic view on the future of our agricultural industry. From Sarah Baker we learnt a pessimistic economic point of view, where climate change has already begun to impact.

Between these strong positive and negative outlooks, we heard some relatively smaller and more specific examples of programs and activities being undertaken to improve sustainability in agriculture in the long term. We heard from Dr Ajay Mathur, Dr Aditi Mukherji and Dr Oudom Phonekhampheng, who spoke of the unintended consequences of past actions taken to increase crop productivity in India and also the fishing practices along the Mekong river. From others, such as Prof Alice Joan de la Gente Ferrer who spoke of Climate Smart Villages, and Angela Manjichi's presentation presented by Dr Eric Hunter who spoke of the SIMLESA project, we learnt about some of the new community-sized actions being undertaken. Further, we discovered new technologies being used for small scale agriculture such as the Biofilta Foodwalls in the South Pacific that Marc Noyce spoke about.

In addition to being given the opportunity to learn from the speakers throughout the three days, we, as scholars, were also provided with a mentor who gave us further opportunities to meet people in our areas of interest. Having access to a mentor gave each of us someone whom we could ask questions of and receive advice from. I feel very lucky with my mentor, Dr Tony Gregson, who gave me the chance to meet a vast number of people. Not only this but he also provided me with a familiar face that I was able to easily seek out and ask any questions I wished to ask.

I am very grateful for this amazing opportunity to learn about and meet the many different types of people and their approaches to our combined challenge towards continually improving our practices for a sustainable future. I have been inspired to change the way I think about the things I am studying, and how certain practices could be improved to make them more sustainable in the future.



RMIT SPONSORED SCHOLAR

John Humphrey

Mentor: Prof Caroline Mohammed, *Tasmanian Institute of Agriculture*

As an environmental engineering and environmental science student, learning that the 2019 Crawford Conference theme focused on “weathering the perfect storm”, I knew immediately that this would be an incredible experience. I view minimisation of the global impact that humans have on the environment as essential in every meaning of the word, with agriculture, water and energy sectors playing a crucial role in catalysing change for the greater good. The conference was an unforgettable experience and one that I will reflect upon greatly in the future. It has helped to shape my views, encourage thought processes, direct personal research opportunities and drive home shared truths in quite a difficult global context.

The opening address from Professor Ross Garnaut set the scene for the remainder of the conference, thus it was a highlight for myself. He spoke truths, gave hard facts and addressed the issues of food security with a strained optimism for the challenges being faced globally, emphasising the application of well targeted and applied science. Garnaut highlighted the need for sound policy to be based on knowledge, research and education, touching on how the policy making process contributed to the task at hand. He delved into heritage and indigenous Australian cultural practices, asking questions and discussing the success and lessons to be learned in modern agriculture by placing value on heritage and treating systems as a whole. Renewable energy generation and sequestration in regional Australia were touted for the creation of a potential world leading low carbon economy, with land management transition a vital opportunity. As an experienced and well respected individual, Garnaut did not beat around the bush, he told it how it was and did not hesitate to admit the difficulties that climate change are having on the earth and societies already, again stressing the role quality research can play - a stimulating address for myself.

The Great Hall of Parliament House was abuzz the following morning, with the fantastic location accentuating the importance of the conference. However, the lacking presence of parliamentary ministers was obvious and personally disappointing, with policy driven change a recurring theme throughout the day.

Prof Sir Charles Godfray and Dr Bruce Campbell led the call for a change in human diet worldwide, reaffirming the major recommendations of August’s IPCC report. Dr Di Mayberry’s discussion of the changes in red meat production acted as a great contrast, stimulating great discussion and thoughts. The fact that a healthy diet is available yet taken for granted in many parts of the developed world also struck a chord with me, with human attitude (at all levels of society) a driving factor for the cycle of over consumption, obesity, health, processed food, food demand, packaging, food waste, emissions and climate change.

Internationally implemented projects showed the use of climate smart villages and smallholder changes across Asia. Prof Alice Joan Ferrer discussing the sustainable future of rural agricultural communities and Dr Ajay Mathar and Dr Aditi Mukherji delving into the huge issues of groundwater, fertiliser and energy use in India. Dr Jim Woodhill from DFAT brought these projects together, highlighting the importance of decision making for smallholders, with long term thinking and restructuring to overcome before large scale implementation, of which I found very interesting.

Overall, I left the conference optimistic and eager for the future. Knowing that there is fantastic work being done in research within Australia and internationally gave me hope for a changing future, despite current governance and limited pressure from policy. On a different note, the importance of networking, discussion and asking questions were also lessons taken home from the Crawford Conference. The ability to be able to speak with clarity and undertake in depth conversations with a variety of audiences was demonstrated, providing me with the drive to partake in such events in the future, leave my comfort zone and become a more rounded and inquisitive individual.

